The Land Suitability Analysis

DTM CONSULTING

Ravalli County, MT

Countywide Zoning

GEUM
ENVIRONMENTAL
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Geum Environmental Consulting, Inc.

Ravalli County Planning Department

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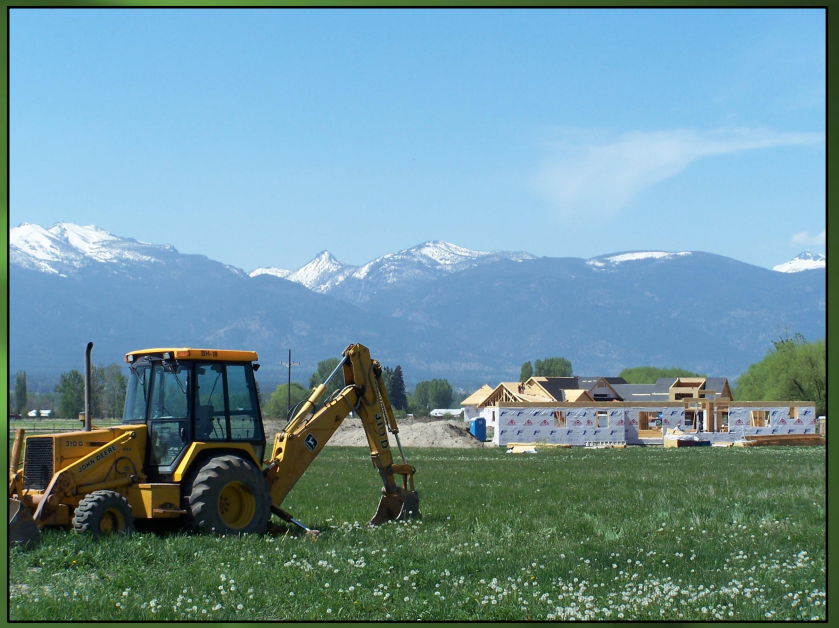
Land Suitability Analysis

GIS (Geographic Information Systems)-based Tool for Evaluating the Suitability of Land for Development



The Land Suitability Analysis

- Goals
- Limitations
- Overview
- Submodels
- Final Model

Project Goals

1) Identify areas suitable for development

2) Identify areas unsuitable for development

Suitable for Development?

Project Goals

3) Compile existing data

4) Gather local knowledge

5) Identify data gaps

6) Develop tool for zoning

Limitations

1) Not a zoning map

2) No new data

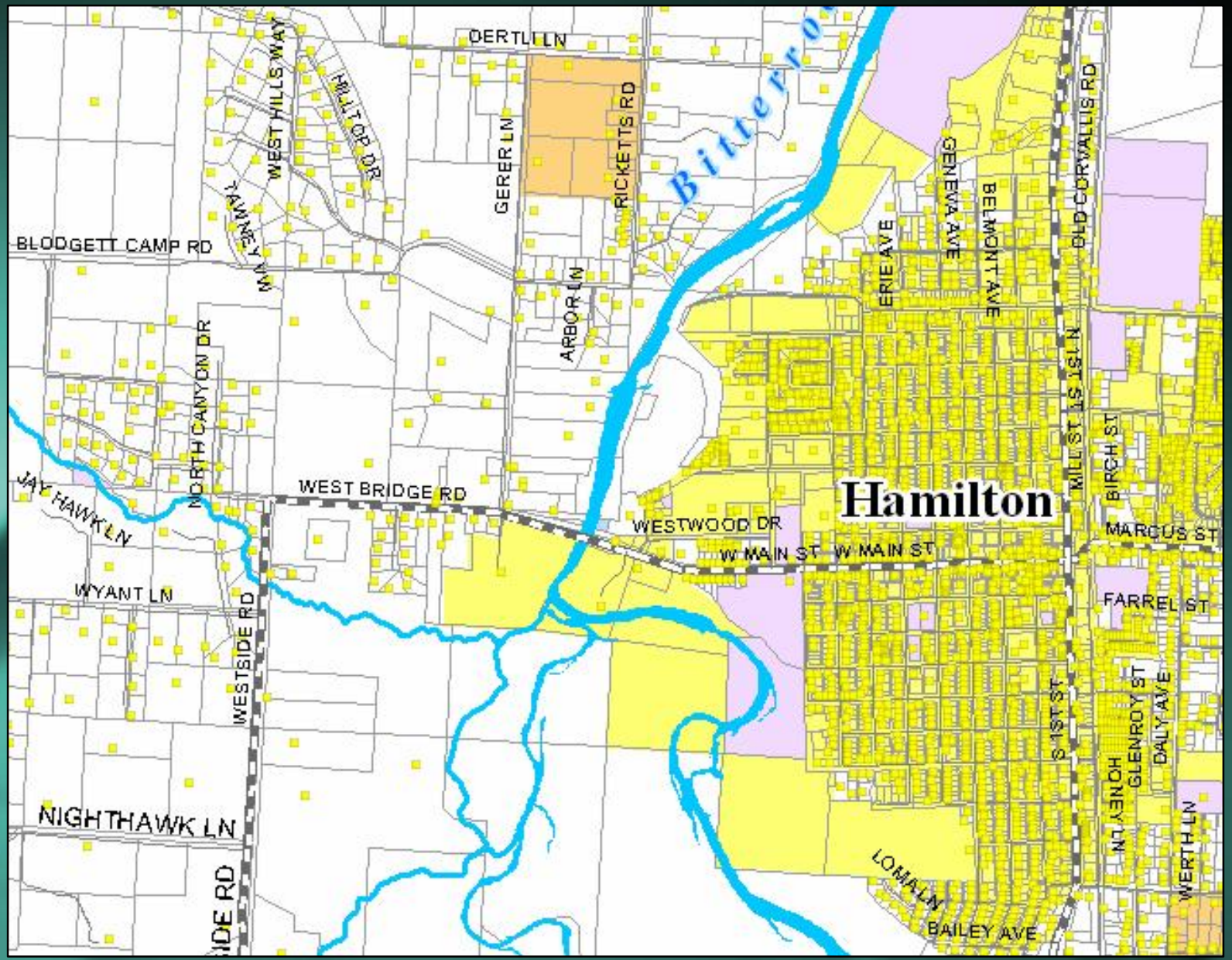
3) Not site specific

Step 1: Identify Question

What areas in Ravalli County are more suitable for development?

What areas are less suitable?

Step 2: Gather Existing Layers



Step 3: Organize Layers Into 6 Submodels

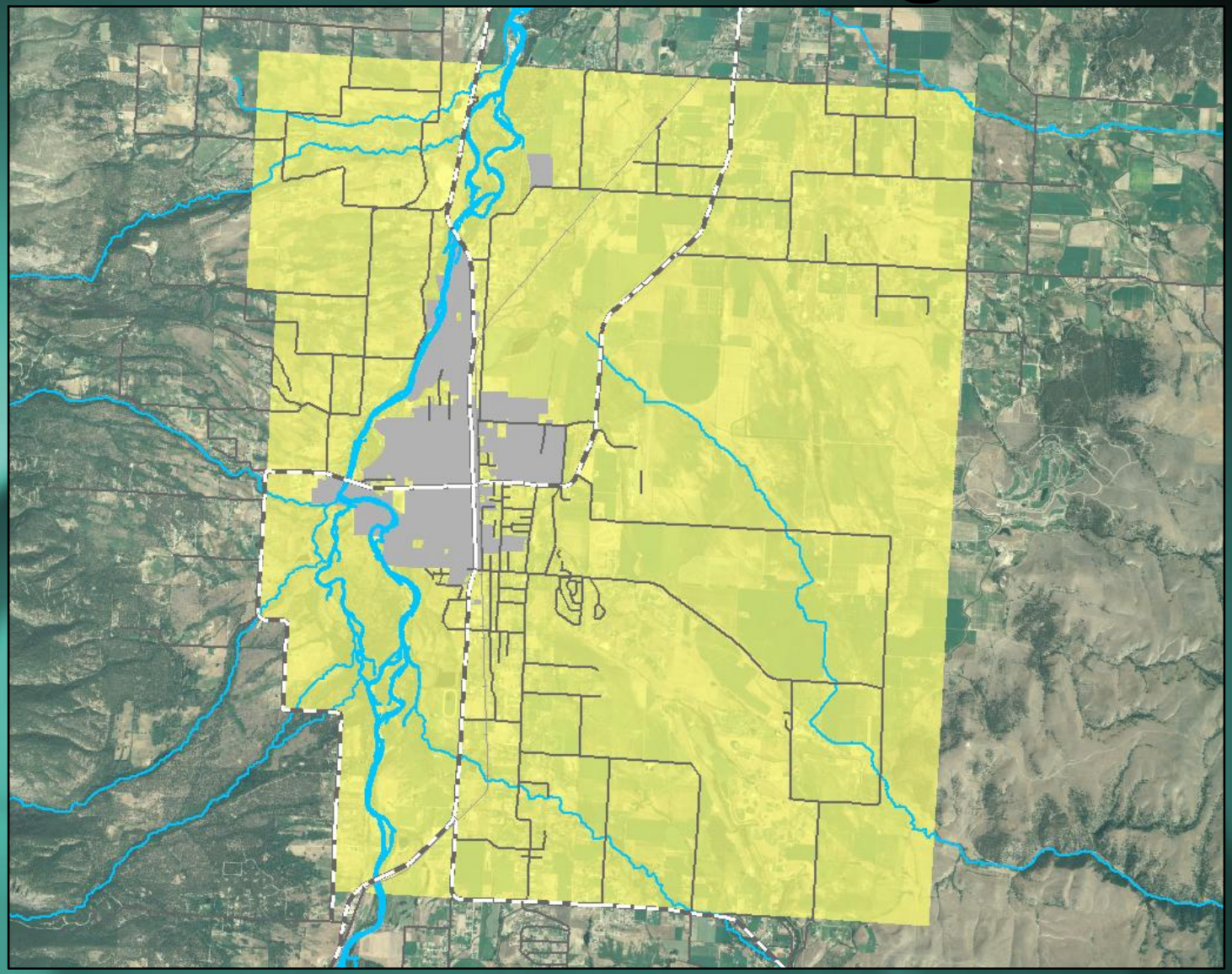
- ❑ Existing Infrastructure
- ❑ Public Health and Safety
- ❑ Water Resources
- ❑ Wildlife Resources
- ❑ Working Lands
- ❑ Open Lands

Step 4: Define Characteristics

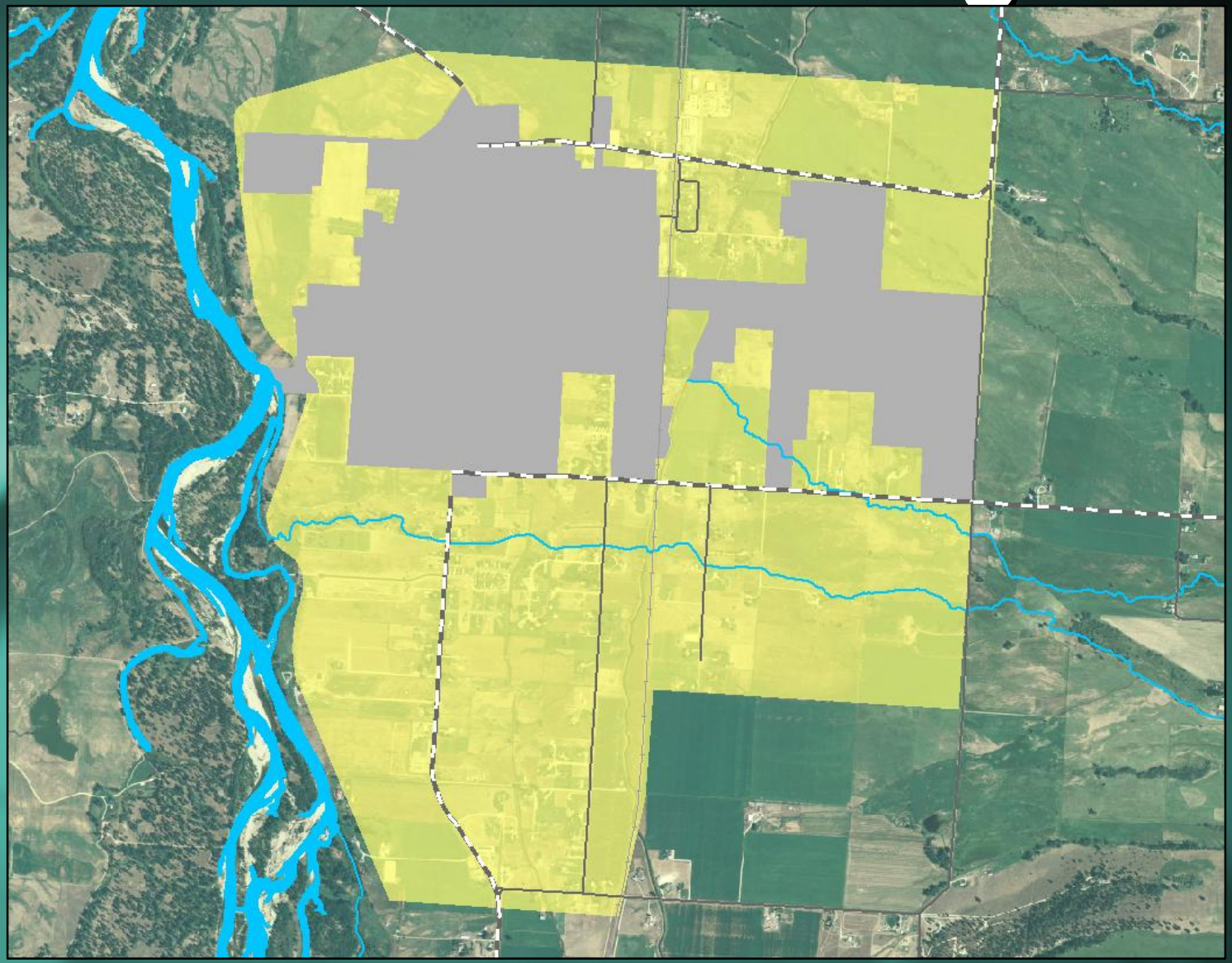
Existing Infrastructure Submodel

- ❑ 4 Incorporated Areas
- ❑ 3 Sewer Districts
- ❑ Transportation Networks
- ❑ Emergency Services
- ❑ Electric and Gas

Existing Infrastructure: Hamilton Planning Area

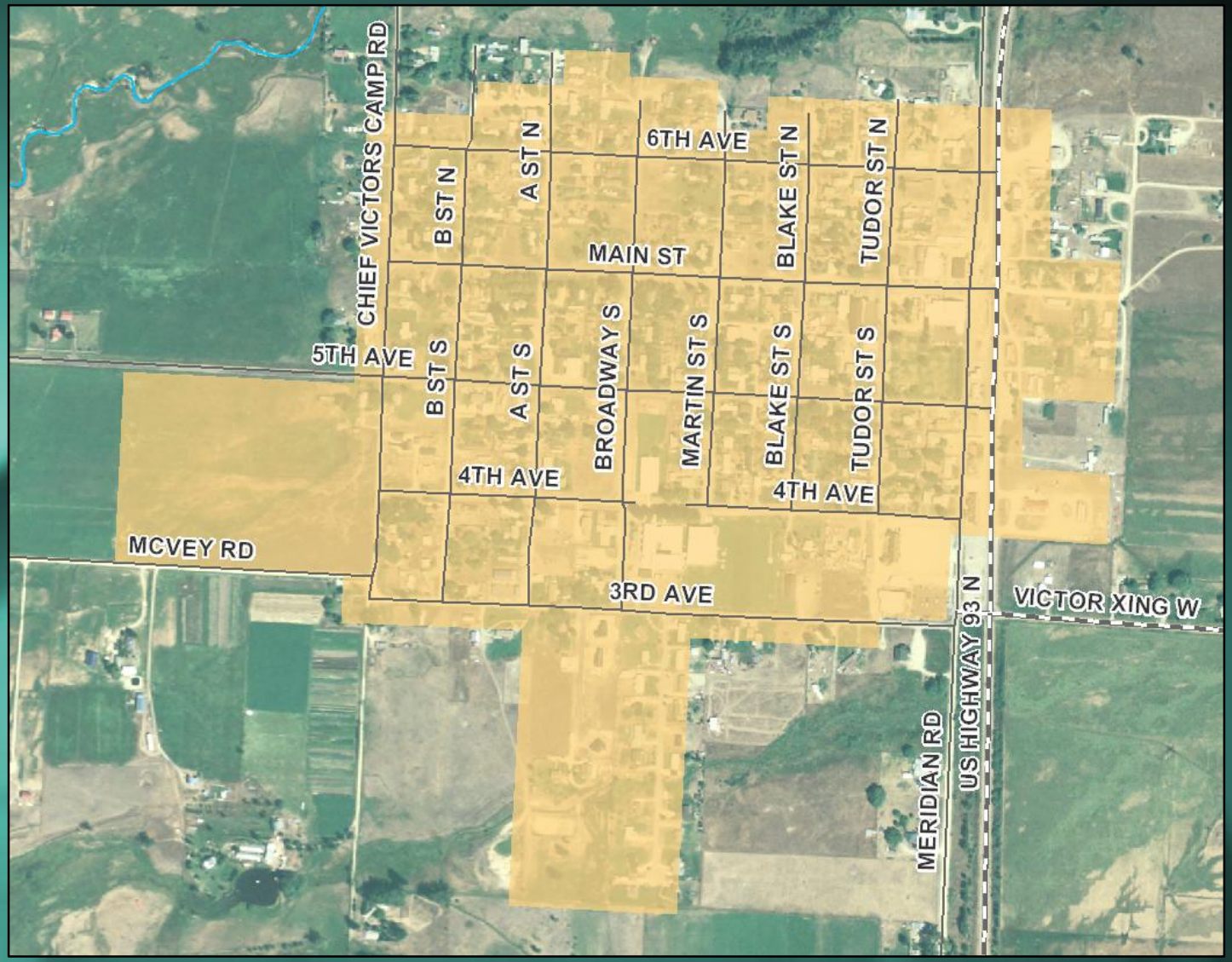


Existing Infrastructure: Stevensville Planning Area

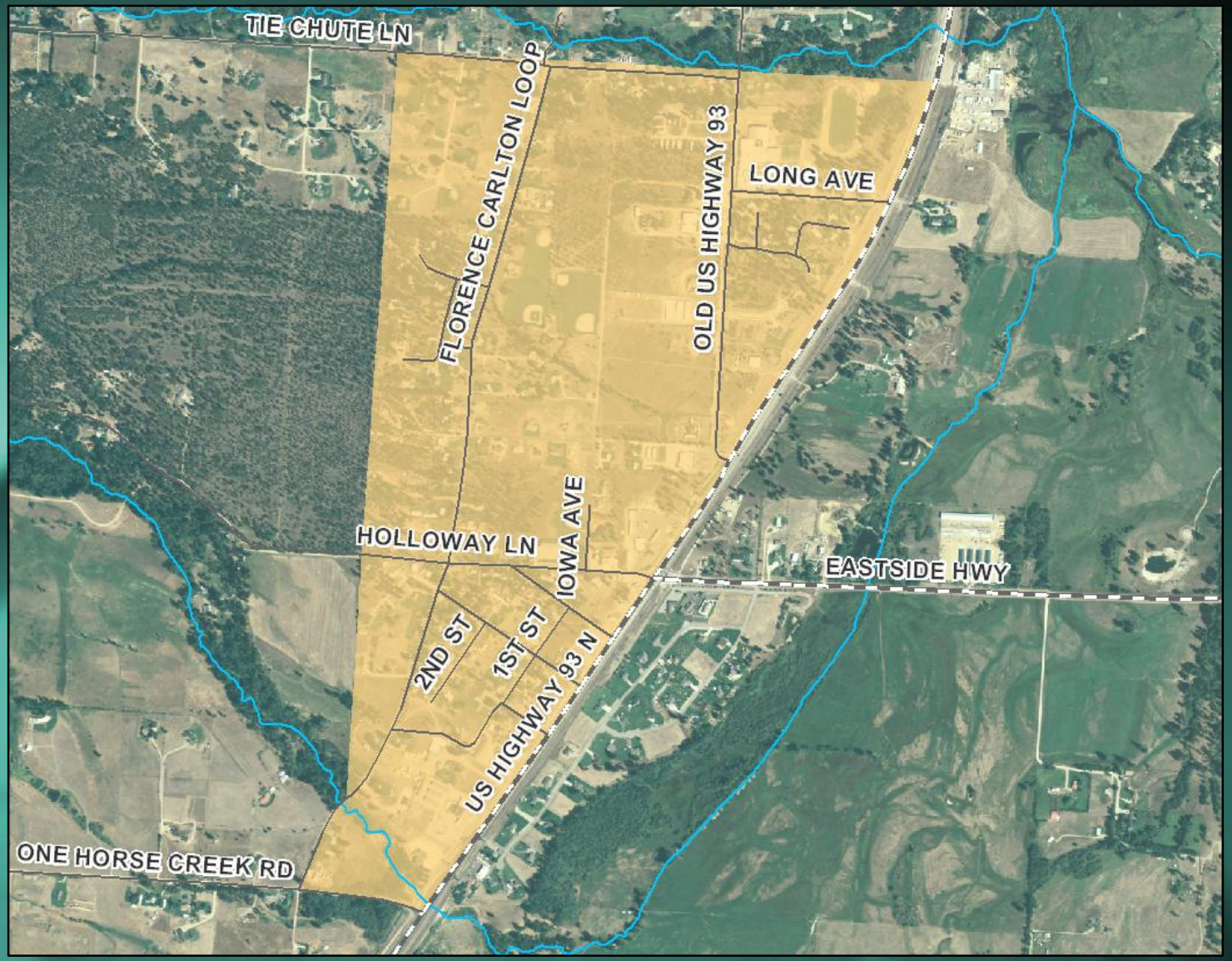


Existing Infrastructure: Corvallis Sewer District

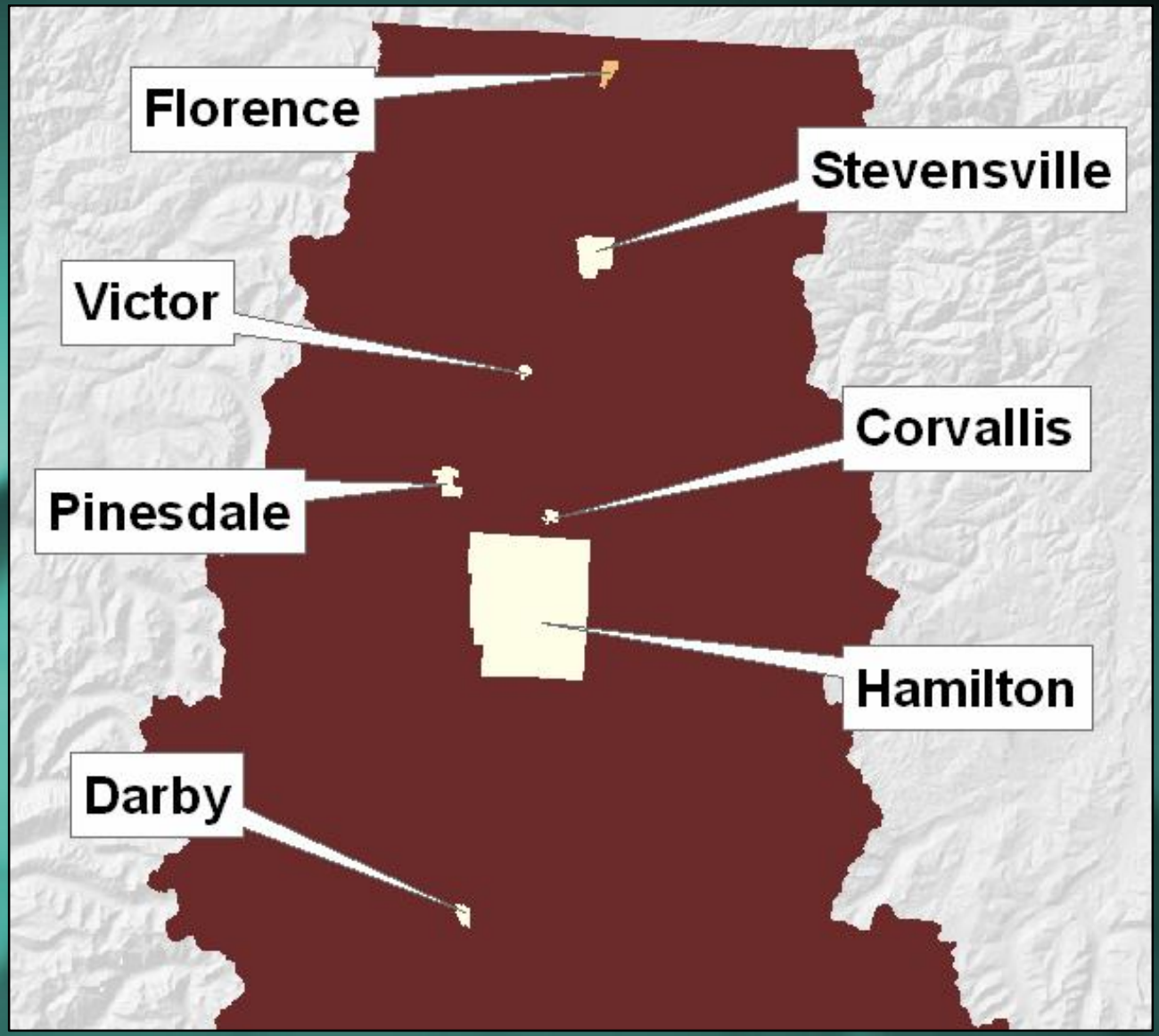
Existing Infrastructure: Victor Sewer District



Existing Infrastructure: Florence Sewer District



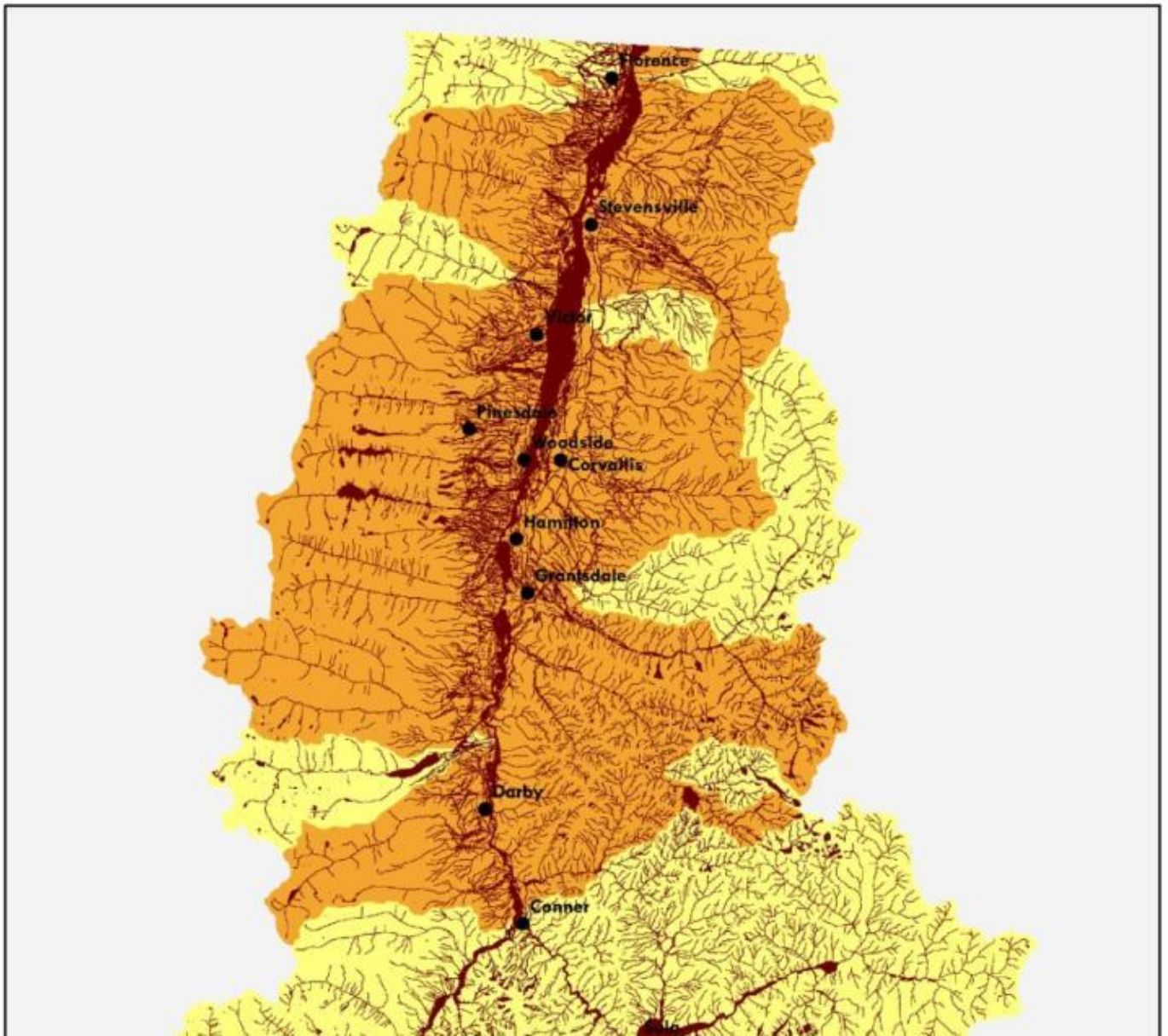
Existing Infrastructure: Final Results



Water Resources Data

- Streams, Rivers, Lakes and other water bodies
- Wetlands and Riparian Areas
- Floodplain
- TMDL (water quality impaired streams)

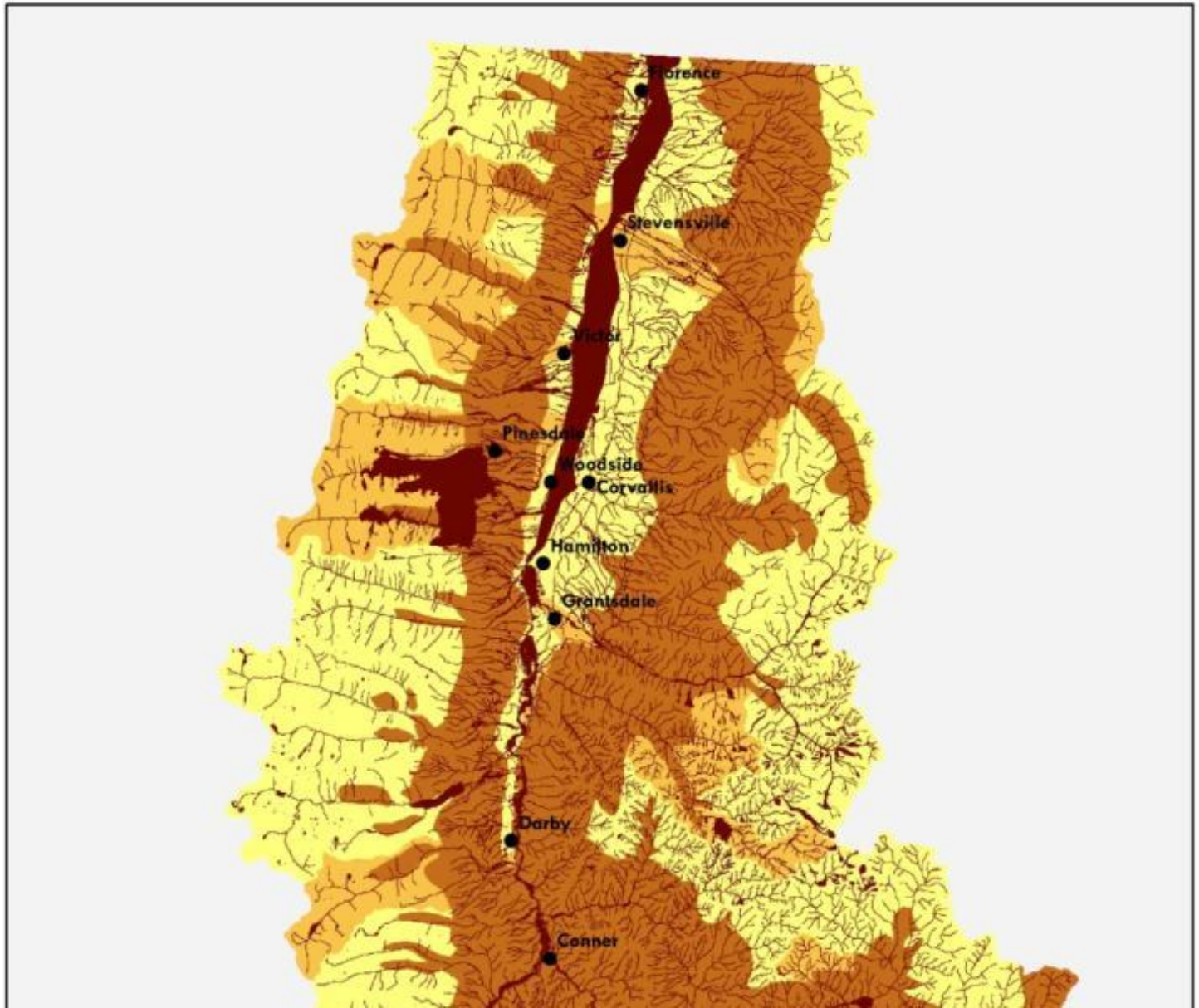
Water Resources Results



Wildlife Resources Data

- Wetlands and Riparian Areas
- Winter Range
- Streams and other water bodies
- Floodplain
- Important Bird Areas
- National Wildlife Refuges
- Bull Trout and spawning streams

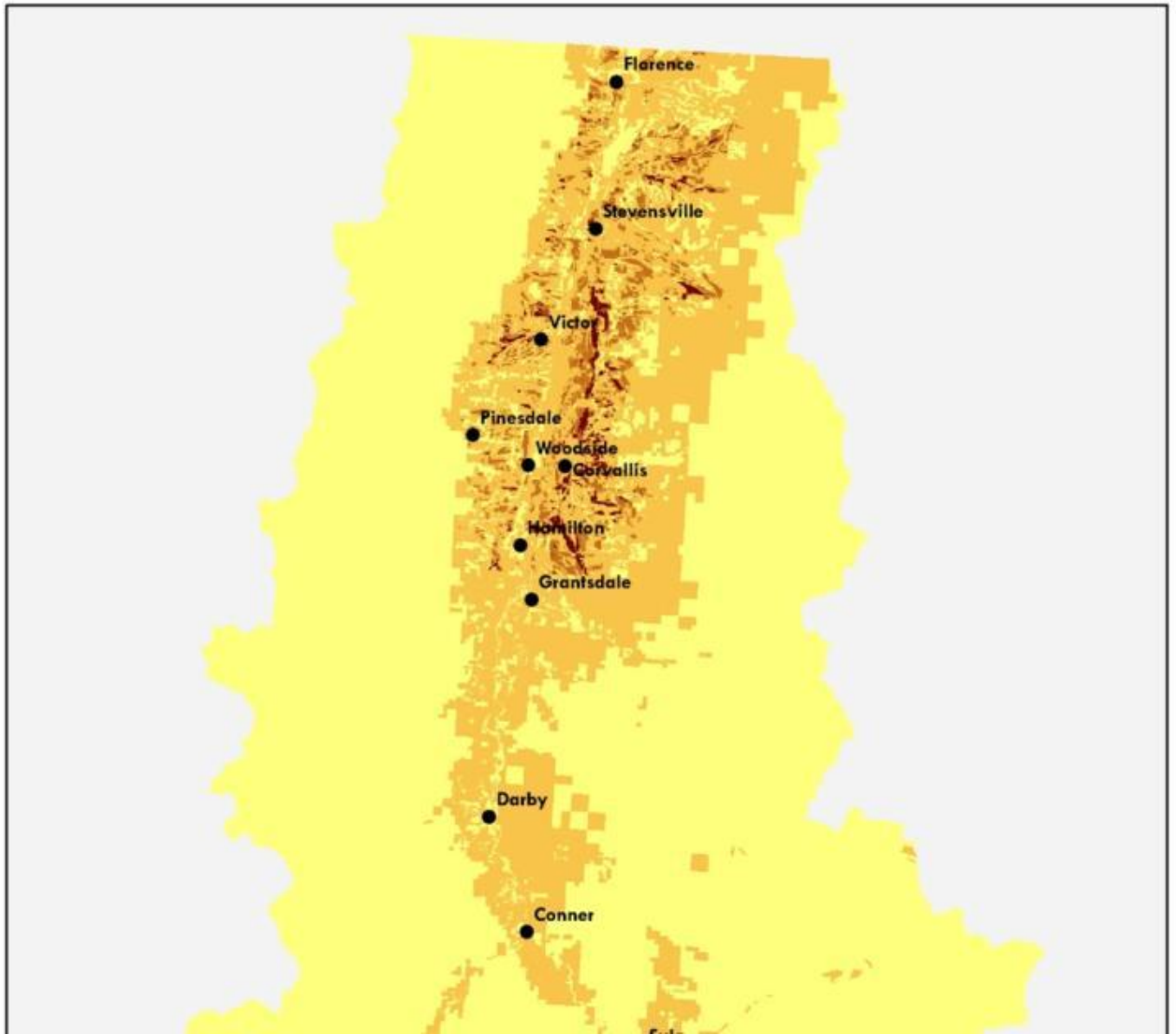
Wildlife Resources Results



Working Lands Data

- Important Farmland Soils
- Irrigated Land
- Ravalli County Parcel Data

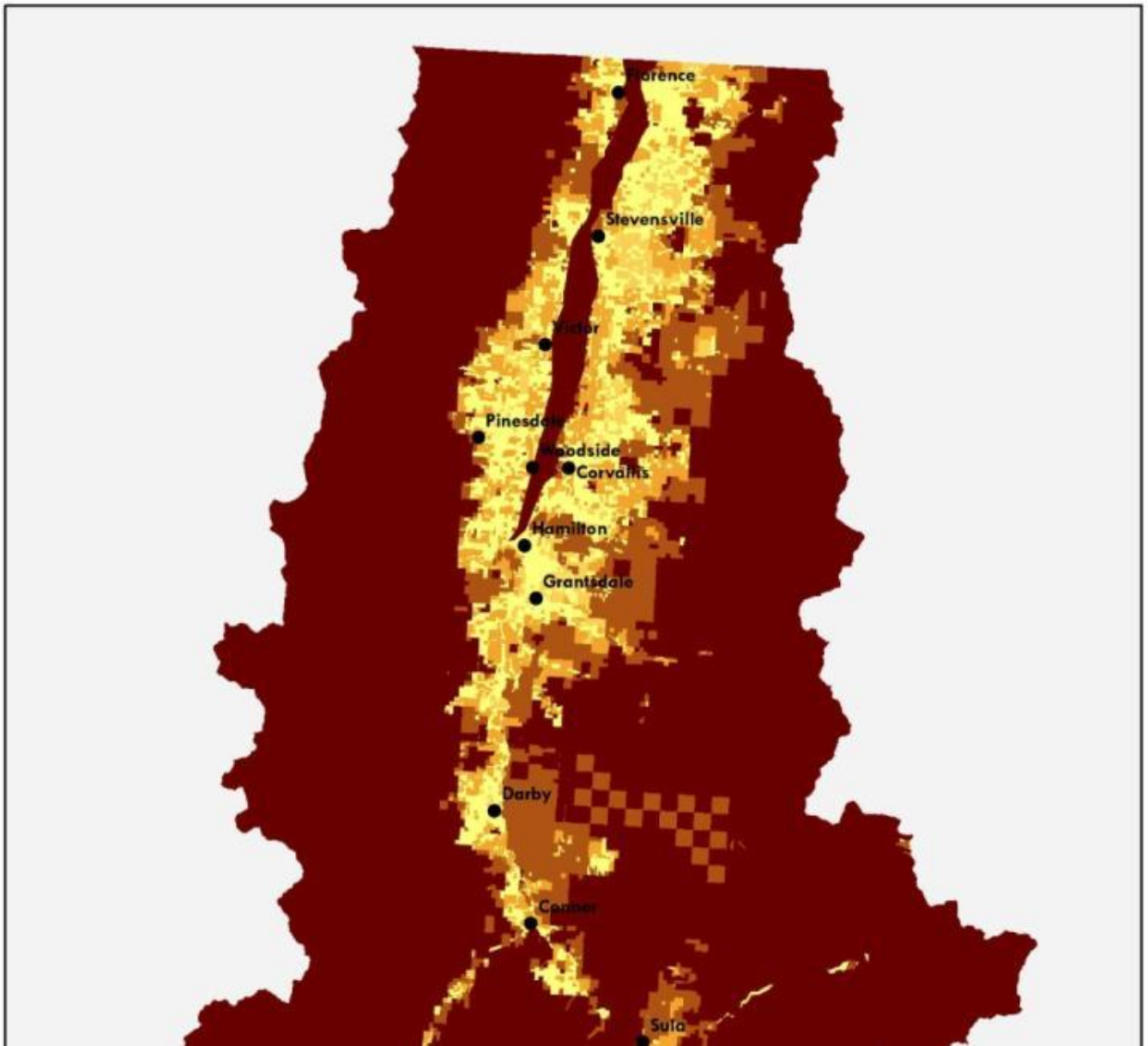
Working Lands Results



Open Lands Data

- Ravalli County Parcel Data
- Stewardship Leases, Easements, and Owners
- Open Lands Board Criteria

Open Lands Results



Public Health and Safety Submodel

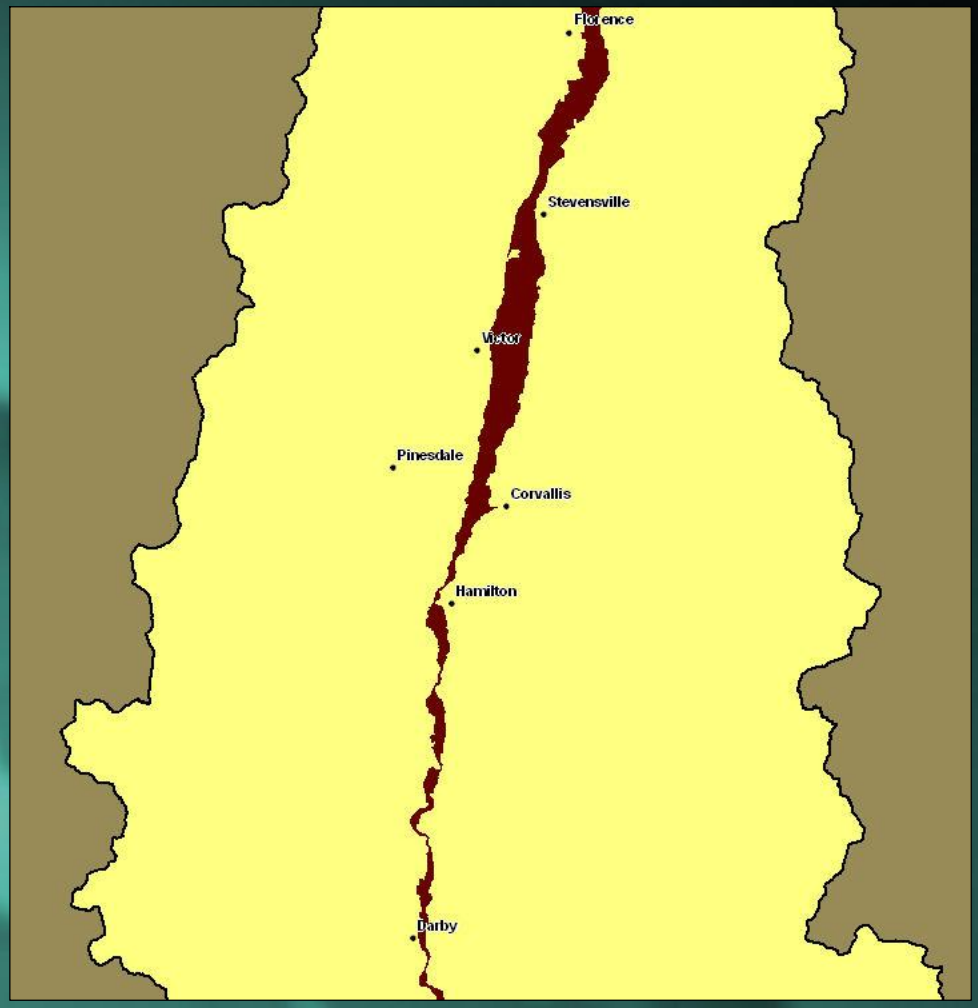
- Slopes > 25%
- Floodplain
- Wildfire Hazard
- Septic Suitability

Public Health and Safety: Slope

- Slopes > 25%

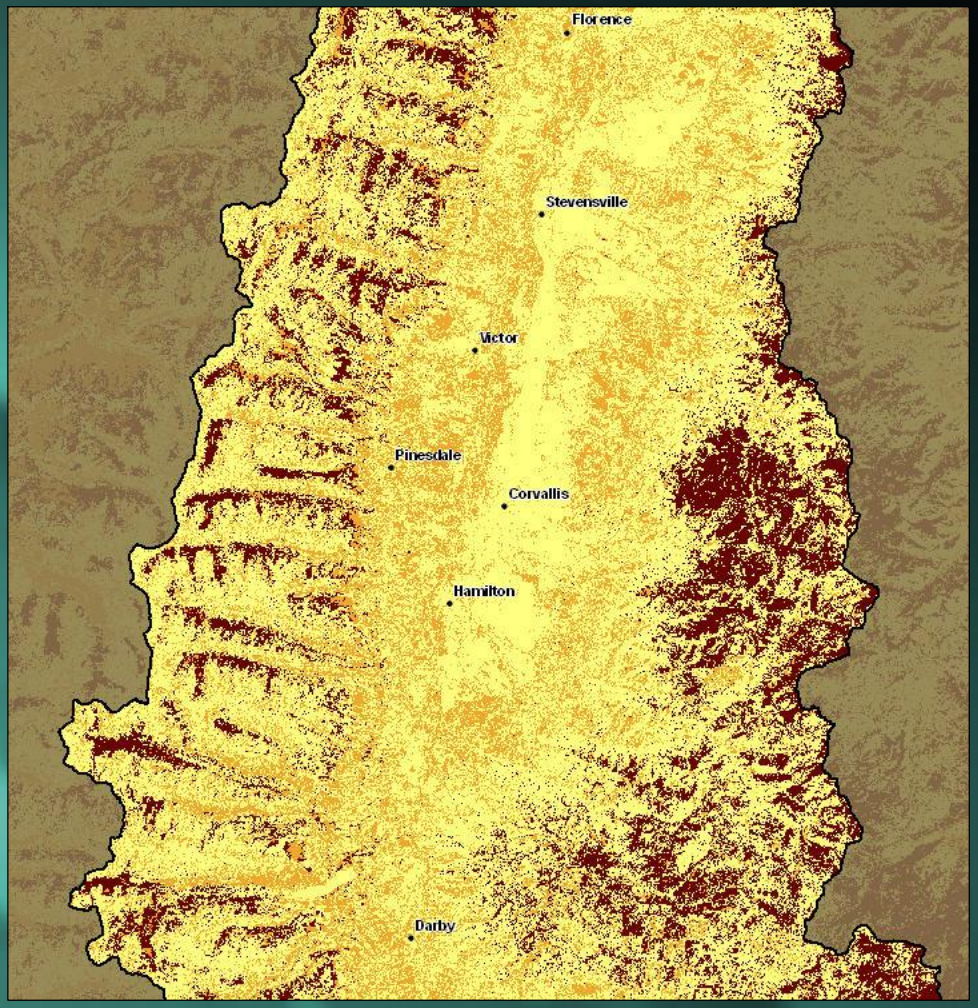
Public Health and Safety: Floodplain

- Floodplain



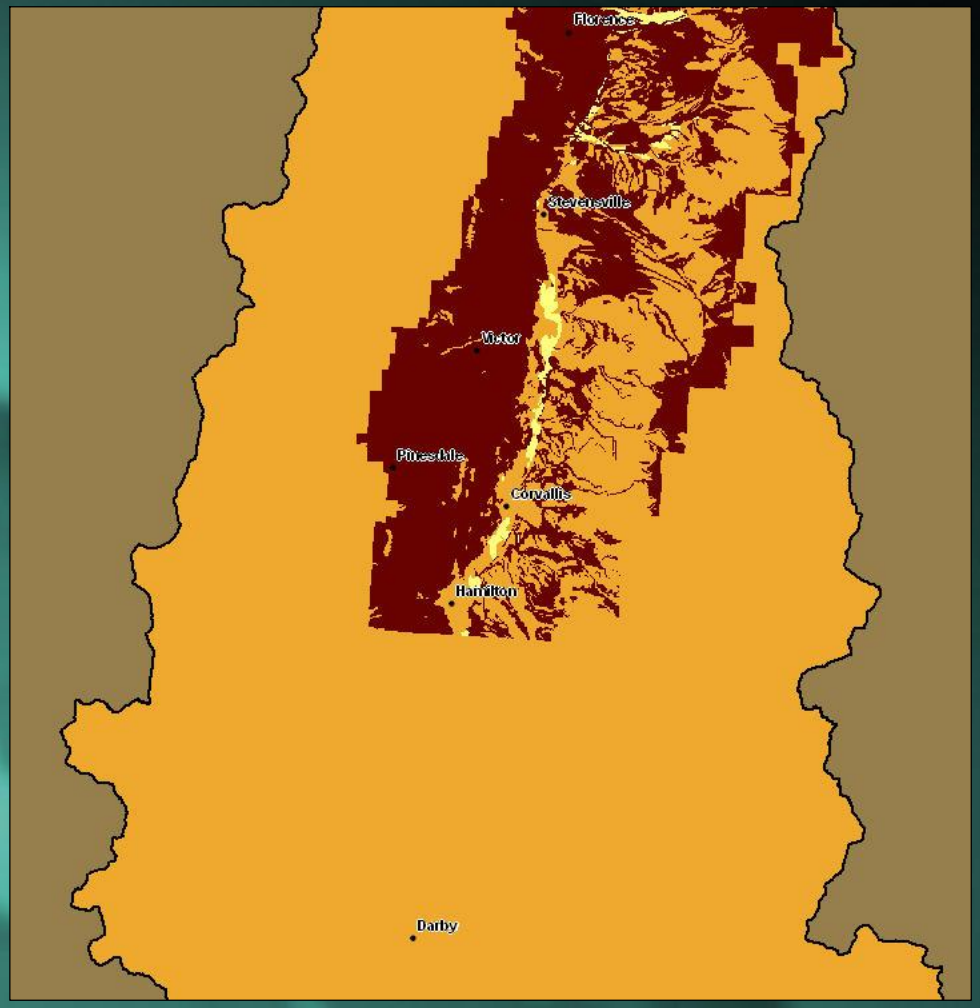
Public Health and Safety: Wildfire Hazard

- Based on vegetation, topography and August weather conditions



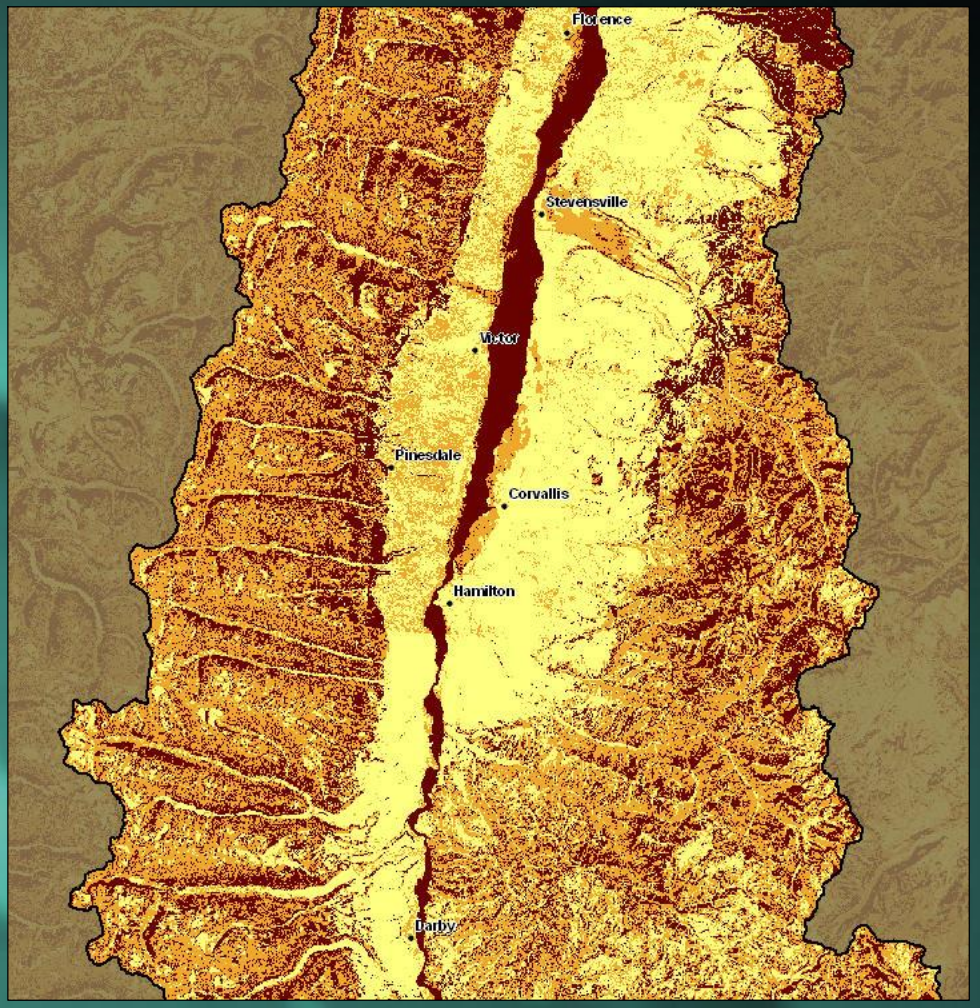
Public Health and Safety: Septic Suitability

- Based on NRCS soils data – unsurveyed areas given ‘moderate’ rating

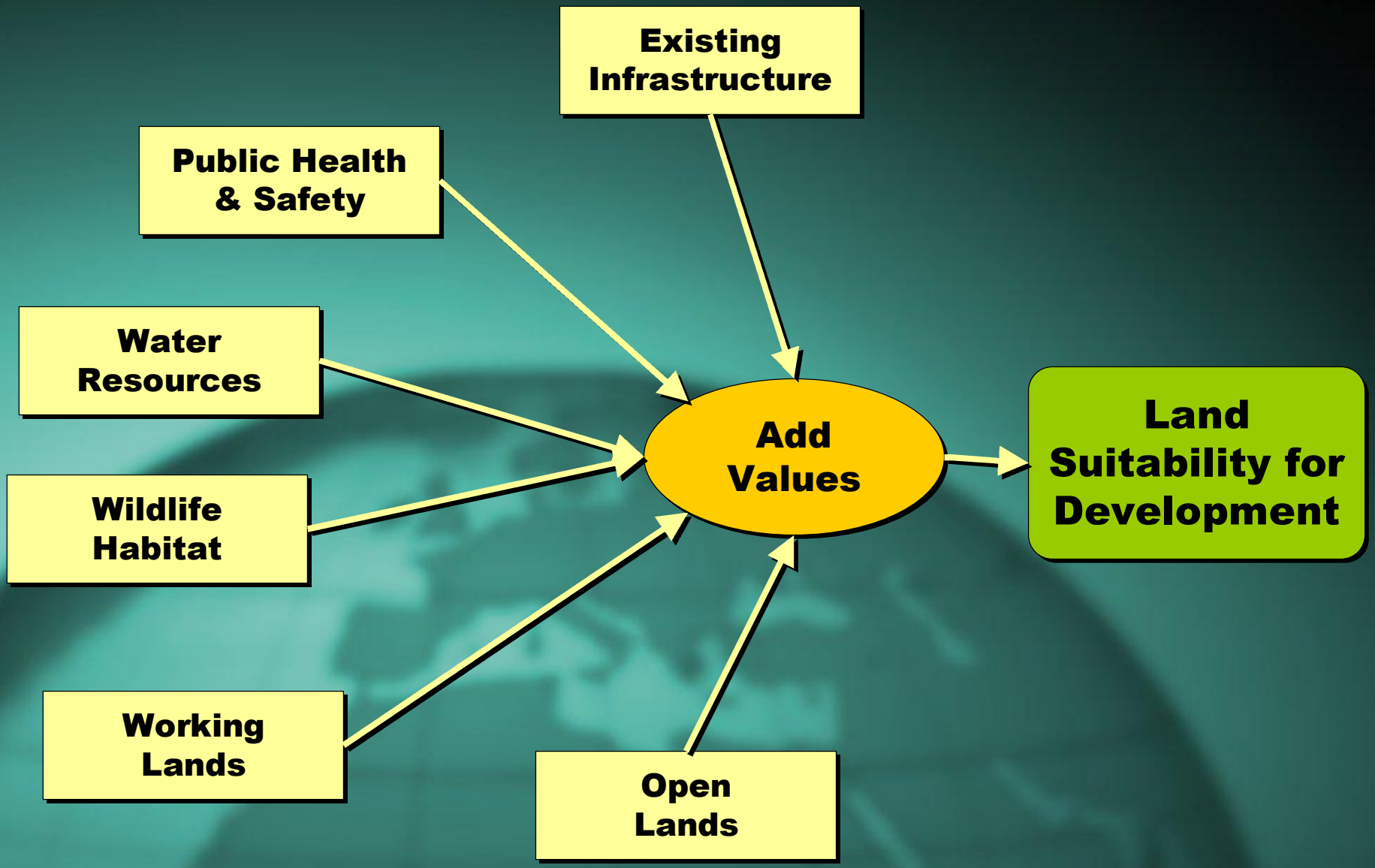


Public Health and Safety: Final Result

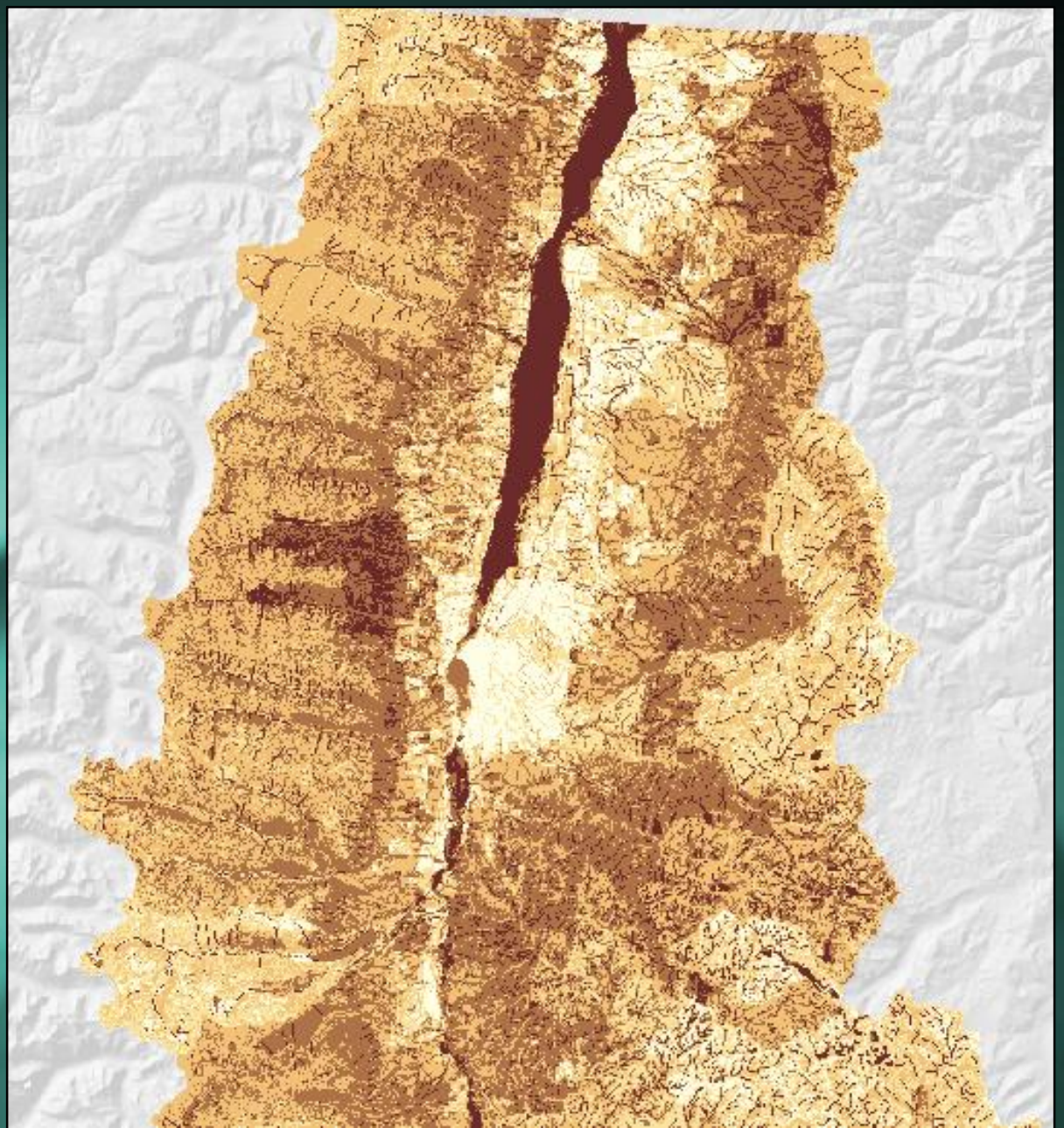
- Combination of all 4 inputs



Step 5: Combine Sub-models



Results of Land Suitability Analysis



How will this be useful?

Local Knowledge

Demographic Information

Scientists/ Experts

Land Suitability Analysis

Growth Policy

Draft Zoning Regulations

Professional Planners